Final Exam

CMSY-217, Spring 2014

Circle the letter of the best response for each item.

1. The `Thread` class is in the _____ package.

   (a) `java.lang`

   (b) `java.util.concurrent`

   (c) `java.util.concurrent.atomic`

   (d) `java.util.concurrent.locks`

2. A Java thread begins its lifecycle by transitioning to the _____ state.

   (a) runnable

   (b) waiting

   (c) terminated

   (d) new

3. A multithreaded application can be created in Java by extending the `Thread` class or implementing the _____ interface.

   (a) `Concurrent`

   (b) `Runner`

   (c) `Runnable`

   (d) None of the above

4. In order to cause the `run` method of a `Thread` or `Runnable` object to begin executing, one makes a call to its _____ method.

   (a) `begin`

   (b) `processTask`

   (c) `start`

   (d) None of the above

5. If a thread is currently executing a _____ block or method, other threads are blocked from executing the same code.

   (a) `synchronized`

   (b) `shared`

   (c) `thread`

   (d) `writeable`

6. When using Java's built-in monitors, every object has a _____ or _____ that the monitor ensures is held by a maximum of only one thread at a time.

    (a) monitor lock, intrinsic lock

    (b) built-in lock, free lock

    (c) mutual exclusion lock, synchronization lock

    (d) None of the above

7. When a thread is finished executing a statement block or method for which it had exclusive access, it can call `Object` method _____ or _____ to allow *waiting* thread(s) to transition to the runnable state.

    (a) `notifyThread`, `notifyAllThreads`

    (b) `wakeUpThread`, `wakeUpAllThreads`

    (c) `notify`, `notifyAll`

    (d) None of the above

8. The _____ thread should be used to perform all tasks that manipulate Swing components since they are not thread safe.

    (a) event-handling

    (b) event-dispatch

    (c) GUI-handling

    (d) None of the above

9. A(n) _____ is thrown when a `String` that is not in proper URL format is passed to a URL constructor.

    (a) `URLError`

    (b) `MalformedURLException`

    (c) `URLException`

    (d) `IllformattedURLException`

10. Once a `ServerSocket` is created, a server can listen (or block) indefinitely for an attempt by a client to connect. This is accomplished with a call to the `ServerSocket` method _____.

    (a) `connect`

    (b) `block`

    (c) `accept`

    (d) `listen`

11. A(n) _____ is thrown when a server address indicated by a client cannot be resolved.

    (a) `ConnectionException`

    (b) `ServerException`

    (c) `MalformedURLException`

    (d) `UnknownHostException`

12. Output _____ are typically used to increase the efficiency of an application by storing large amounts of data locally so that the data can be transmitted over the network less frequently.

    (a) objects

    (b) broadcasters

    (c) buffers

    (d) None of the above

13. The IP address 127.0.0.1 is also known as _____.

    (a) localhost

    (b) remotehost

    (c) localserver

    (d) remoteserver

14. Specifying a port that is already in use or specifying an invalid port number when creating a `ServerSocket` reuslts in a _____.

    (a) `BindException`

    (b) `PortInUseException`

    (c) `PortException`

    (d) `ConnectionException`

15. In order to be able to send and receive messages in parallel over a network connection, a program must use _____ thread(s) of execution.

    (a) one

    (b) two

    (c) three

    (d) four

16. What API do Java programs use to communicate with databases?

   (a) DBMS

   (b) JDBC

   (c) RDBMS

   (d) Database

17. A _____ can be run to obtain data from a table in a database.

   (a) select

   (b) query

   (c) get

   (d) None of the above

18. What is the name of the package that contains the interfaces for the API that Java uses to communicate with databases?

   (a) `java.jdbc`

   (b) `javax.jdbc`

   (c) `java.sql`

   (d) `java.sql.jdbc`

19. What exception is thrown if the class loader cannot locate an appropriate driver class to connect to a database?

   (a) `NoSuchClassException`

   (b) `ClassCastException`

   (c) `ClassNotFoundException`

   (d) `IllegalClassException`

20. When a `ResultSet` is first returned, its cursor is positioned _____.

   (a) before the first row

   (b) at the first row

   (c) at the last row

   (d) after the last row

21. Version 4.0 of the API that Java uses to communicate with databases supports _____, so that it is not necessary to manually load the database driver before accessing a database.

   (a) automatic driver downloading

   (b) automatic driver creation

   (c) automatic driver discovery

   (d) None of the above

22. A URI which specifies a document location is called a(n) _____.

    (a)   address

    (b)   Uniform Resource Locator (URL)

    (c)   location

    (d)   None of the above

23. A `Statement` object's _____ method returns a `ResultSet` object.

    (a)   `executeUpdate`

    (b)   `executeQuery`

    (c)   `execute`

    (d)   None of the above

24. Three typical tiers of a web application are the _____.

    (a)   user interface, business logic, and information tiers

    (b)   browser, server, and information tiers

    (c)   client, middle, and top tiers

    (d)   None of the above

25. Which of the following statements is true?

    (a)   Servlets extend a server's functionality by allowing the server to generate dynamic content.

    (b)   Servlets extend a client's functionality by allowing the web browser to generate dynamic content.

    (c)   Neither of the above

    (d)   Both of the above

26. Which of the following statements is true?

    (a)   Servlets are an extension of JavaServer Pages (JSP) technology.

    (b)   JavaServer Pages (JSP) are an extension of Servlet technology.

    (c)   Neither of the above

    (d)   Both of the above

27. JavaServer Faces (JSF) is a _____ that simplifies the design of an application's user interface and helps to separate the application's presentation from its business logic.

    (a)   database application framework

    (b)   desktop application framework

    (c)   web application framework

    (d)   None of the above

28. Tracking individual clients as they visit a website is know as _____.

    (a)   session tracking

    (b)   client tracking

    (c)   personalizing

    (d)   stalking

29. A cookie is _____.

    (a)   something you eat

    (b)   a piece of data that maintains information about a client during and possibly between browser sessions

    (c)   a piece of data that maintains information about all the servers that a client visits

    (d)   None of the above

30. What method call will cause the currently executing thread to cease execution for a period of one second?

    (a)   `Thread.cease(1000);`

    (b)   `Thread.halt(1000);`

    (c)   `Thread.pause(1000);`

    (d)   `Thread.sleep(1000);`

31. The protocol that web browsers use to communicate with servers on the internet is called _____.

    (a)   ASP

    (b)   HTML

    (c)   HTTP

    (d)   PHP

32. Which tool can be used to run scripts or interactive queries against a Java DB (Apache Derby) database?

    (a)   `dblook`

    (b)   `ij`

    (c)   `sysinfo`

    (d)   None of the above

33. The _____ servlet container was used in class for Servlet and JavaServer Page (JSP) development.

    (a) GlassFish

    (b) JBoss

    (c) Tomcat

    (d) WebSphere

34. Parameters which are passed to a servlet from an XHTML form using POST can be obtained from the argument of type _____ of the `doPost` method.

    (a) `HttpServlet`

    (b) `HttpServletContent`

    (c) `HttpServletRequest`

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35. Which is *not* a convention that a JavaBean must follow?

    (a) must have a zero-argument constructor

    (b) instance variables must be private

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36. Which of the following steps is required to begin developing Android applications.

    (a) register for an account at the Android Market

    (b) download and install the Android SDK

    (c) purchase an Android development phone

    (d) create a provisioning profile

37. The _____ plugin for the Eclipse IDE provides a powerful, integrated environment in which to build Android appilcations.

    (a) ADT

    (b) AVD

    (c) POI

    (d) SDK

38. Android is based upon the _____ Java implementation.

    (a) Apache Harmony

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39. The _____ API may be used to read, write, and modify Excel spreadsheets in the Office Open XML (.xlsx) format directly from Java using the `XSSFWorkbook` class.

   (a)   Apache POI

   (b)   Java .NET

   (c)   JExcel (jxl)

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40. The _____ API may be used to create and modify Portable Document Format (PDF) files directly from Java.

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